

IN THE CLAIMS

1. (Currently Amended) A device for interworking asynchronous transfer mode cells, comprising:

a transmission convergence sublayer operable to receive one or more traffic streams, the transmission convergence sublayer being operable to identify a selected one of the one or more traffic streams carrying asynchronous transfer mode cells; and

an encapsulation unit operable to receive the selected traffic stream carrying the asynchronous transfer mode cells identified by the transmission convergence sublayer, the encapsulation unit being operable to encapsulate the traffic stream carrying the asynchronous transfer mode cells into an encapsulated frame having a protocol format readable by a serial communications controller that receives the encapsulated frame, wherein the transmission convergence sublayer is operable to have traffic in the selected one of the one or more traffic streams not carrying asynchronous transfer mode cells be provided to the serial communications controller without being encapsulated by the encapsulation unit.

2. (Previously Presented) The device of Claim 1, further comprising:

a framer unit operable to receive the traffic streams from a trunk line, the framer unit being operable to provide the traffic streams to the transmission convergence sublayer.

3. (Previously Presented) The device of Claim 2, further comprising:

a controller unit operable to receive one or more of the traffic streams from the framer unit, the controller unit being further operable to communicate data from the framer unit and the encapsulation unit for transfer to the serial communications controller.

4. (Previously Presented) The device of Claim 3, wherein the controller unit is operable to select the data from the framer unit and the encapsulation unit to be propagated using respective links based on whether or not the data is carrying asynchronous transfer mode cells.

5. (Previously Presented) The device of Claim 4, wherein the data includes one or more packets associated with a selected one of a frame relay protocol, a point to point protocol (PPP), and a high level data link control (HDLC) protocol.

6. (Previously Presented) The device of Claim 1, wherein the transmission convergence sublayer is operable to identify and to discard asynchronous transfer mode null cells associated with a asynchronous transfer mode traffic that does not include a payload.

7. (Previously Presented) The device of Claim 1, wherein the transmission convergence sublayer is operable to perform header error correction for the selected asynchronous transfer mode stream prior to communicating the selected stream to the encapsulation unit.

8. (Previously Presented) The device of Claim 1, wherein the transmission convergence sublayer is operable to perform header error correction and checksum functions, and to discard one or more of the asynchronous transfer mode cells with header error correction or checksum failures.

9. (Previously Presented) The device of Claim 1, wherein the encapsulated frame is transferred to the serial communication controller over a time division multiplexed communication link.

10. (Original) The device of Claim 1, wherein the transmission convergence sublayer and the encapsulation unit are operable to receive programming commands to change a communication capability of the device.

11. (Currently Amended) A method for interworking asynchronous transfer mode cells, comprising:

receiving one or more traffic streams;

identifying a selected one of the traffic streams as including one or more asynchronous transfer mode cells carrying telecommunications traffic;

encapsulating one or more of the asynchronous transfer mode cells into an encapsulated frame having a protocol format readable by a serial communications controller;

identifying telecommunications traffic in the selected one of the one or more traffic streams as not being carried by asynchronous transfer mode cells;

bypassing encapsulation for the telecommunications traffic not being carried by asynchronous transfer mode cells.

12. (Previously Presented) The method of Claim 11, further comprising:

determining whether or not the received traffic includes one or more of the asynchronous transfer mode cells; and

providing one or more of the traffic streams that do not include one or more of the asynchronous transfer mode cells directly to the serial communications controller.

13. (Previously Presented) The method of Claim 11, wherein a selected one of the streams includes frame relay packets.

14. (Previously Presented) The method of Claim 11, further comprising:

discarding one or more of the asynchronous transfer mode cells that do not carry a payload.

15. (Previously Presented) The method of Claim 11, further comprising:

performing a header error correction function for one or more of the asynchronous transfer mode cells received.

16. (Previously Presented) The method of Claim 11, further comprising:

performing header error correction and checksum functions for one or more of the asynchronous transfer mode cells.

17. (Previously Presented) The method of Claim 16, further comprising:

discarding one or more of the asynchronous transfer mode cells that fail the header error correction or checksum functions.

18. (Original) The method of Claim 11, further comprising:

receiving programming commands in order to change a communication capability according to a desired protocol format for the communications controller.

19. (Original) The method of Claim 18, wherein the desired protocol format is a high level data link control protocol.

20. (Currently Amended) A device for interworking asynchronous transfer mode cells, comprising:

means for receiving one or more traffic streams;

means for identifying a selected one of the traffic streams as including one or more asynchronous transfer mode cells carrying telecommunications traffic; and

means for encapsulating one or more of the asynchronous transfer mode cells into an encapsulated frame having a protocol format readable by a serial communications controller;

means for identifying telecommunications traffic in the selected one of the one or more traffic streams as not being carried by asynchronous transfer mode cells;

means for bypassing encapsulation for the telecommunications traffic not being carried by asynchronous transfer mode cells.